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INFORMATION REPORT

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The following list describes the research orders to be undertaken by the various schools of the Freiberg Metallurgical and Mining School (Hüttenwesen und Erzbergbau Bergakademie Freiberg). It also states the amount allotted to the research project and the completion deadline.

1. School Section and
Person in Charge of
the Research

Project
Number

Declassification

Description

Institute for Coal Chemistry

150800 F2-08

(54)

To determine presence of rare metals in DDR lignite and mineral coal, with special emphasis on iodine content. The amount allotted was 35,000 East marks and the deadline was set for the fourth quarter of 1952.

Prof. Dr. (fnu) Lissner

Institute for Mineralogy

150800 F2-51

(54)

Prof. Dr. Friedrich Leutwein

To make geochemical tests on the origin of coal deposits. The amount allotted was 30,000 east marks and the deadline was set for the fourth quarter of 1953.

150800 F2-53

(55)

Mining geological tests on the DDR ore deposits, primarily nonferrous deposits. The amount allotted was 40,000 east marks and the deadline was set for the fourth quarter of 1952.

CLASSIFICATION

SECRET

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Institute for Mineralogy Cont'd

150800 F2-52 (544.6) Development of spectrograph procedures; Analytic procedures. The amount allotted was 30,000 east marks and the deadline was set for the fourth quarter of 1952.

Institute for Applied Geophysics

Prof. Dr. (fnu) Buchheim

150800 F2-10 (550.83) Development of an electrical pressure sounding device (Drucksonde) for insertion in holes made by hand drills underground as well as geophysical procedures and equipment for the control of ceiling pressure during mining. The amount allotted was 30,000 east marks and the deadline was set for the fourth quarter of 1952.

150800 F2-11 (550.83) Attempt to distinguish metallic from electrolytic conductors in the ground during electric soundings. The amount allotted was 30,000 east marks and the deadline was set for the fourth quarter of 1952.

150800 F2-22 (550.83) To attempt to localize the strata boundaries in mining by means of a seismographic probe. The amount allotted was 40,000 east marks.

Institute for Physics

Prof. Dr. (fnu) Liebold

150800 F2-54 (62) To measure the gamma rays in deep-well holes with a Geiger counter. The amount allotted was 10,000 east marks and the deadline was set for the fourth quarter of 1953.

Institute for Coal Mining

Prof. Dr. (fnu) Fleischer

150800 F2-02 (62) To develop a large model for testing the load capacity and the pressure distribution in soils of various physical compositions, mechanical mixtures, water saturations, and degrees of compactness. The amount allotted was 30,000 east marks and the deadline was set for the second quarter of 1954.

SECRET

Institute for Coal Mining

- 150800 F2-03 (62) Research on the load capacity of the soil in open-pit mining for the construction of large apparatuses. The amount allotted was 40,000 east marks, and the deadline was set for the fourth quarter of 1953.
- 150800 F2-04 (62) Research on the maximum size of enterprises in open-pit mining and briquet factories. The amount allotted was 170,000 east marks and the deadline was set for the fourth quarter of 1952.
- 150800 F2-05 (62) Tests on the importance of pressure conditions in loose rock and bed-rock especially in open-pit mining. The amount allotted was 27,000 east marks and the deadline was set for the fourth quarter of 1954.

Prof. (fnu) Kegel

Institute for Mining Science

Prof. Dr. (fnu) Spackeler

- 150800 F2-13 (62) Research on solid rock pressure in lignite deep mining and on the construction of underground pits in the open-pit mining of lignite. The amount allotted was 35,000 east marks and the deadline was set for the fourth quarter of 1952.
- 150800 F2-14 (62) Tests on the effect of the explosives in blasting in volcanic matter and other rocks. The amount allotted was 50,000 east marks and the deadline was set for the fourth quarter of 1952.
- 150800 F2-15 (62) Tests on earth movements as the result of mining potash with the purpose of developing the mining process to prevent water seepage and the collection of explosive gases. The amount allotted was 15,000 east marks and the deadline was set for the fourth quarter of 1952.

Institute for Mining Science (Cont'd)

150800 F2-55 (62) Tests on the reaction of loose rock and lignite to freezing as a result of sinking shafts by the freezing process. The amount allotted was 25,000 east marks and the deadline was set for the fourth quarter of 1952.

Institute for Washing Ores

Prof. Dr. (fnu) Kirchberg

150800 F2-22 (62) Washing of complex lead, zinc, and pyrite ores for the purpose of improving the nonferrous metal base. The amount allotted was 26,000 east marks and the deadline was set for the fourth quarter of 1952.

150800 F2-23 (63) Improvement of the yield and the enrichment process in the washing of DDR tin ores. The amount allotted was 20,000 east marks and the deadline was set for the fourth quarter of 1952.

Institute for Metallography

Prof. Dr. Erdmann-Jesnitzer

150800 F2-30 (62) Investigation into the nature of the molecular construction of molten metal and welded metal surfaces. The amount allotted was 14,000 east marks and the deadline was set for the fourth quarter of 1953.

150800 F2-32 (62) Development of new kinds of jackets which are able to be easily produced for welding electrodes. The amount allotted was 13,000 east marks and the deadline was set for the fourth quarter of 1953.

150800 F2-35 (66) Research on statistical processes for welded frame-works in lightweight construction. The amount allotted was 15,000 east marks and the deadline was set for the fourth quarter of 1953.

Institute for Metallography

150800 F2-36

- (62) Making of corrosion-resistant, metallic, non-metalloid coatings on metals and alloys by orienting the metal structures in relation to the surface to be protected. The amount allotted was 11,000 east marks and the deadline was set for the fourth quarter of 1952.

150800 F2-38

- (62) Testing of bearing sockets of small thickness in relation to the effect of greasing in order to save nonferrous metals. The amount allotted was 18,000 east marks and the deadline was set for the fourth quarter of 1952.

Briquet Institute

Prof. Dr. (fnu) Rammler

150800 F2-45

- (62) Comparison of gas drying and steam drying with respect to briquetting technique and thermal economy. The amount allotted was 20,000 east marks and the deadline was set for the fourth quarter of 1953.

150800 F2-46

- (62) Laboratory tests on the wiring of aftertreatment apparatuses (after-drying, after-splitting, and cooling the coals) in briquet factories, especially for fine-grain briquetting. The amount allotted was 15,000 east marks and the deadline was set for the fourth quarter of 1953.

Institute for Technical Analysis of Fuel

Prof. Dr. (fnu) Rammler

150800 F2-06

- (66) Comparison of carbonization experiments using briquets, which are used in different carbonization experiments. The amount allotted was 26,000 east marks and the deadline was set for the fourth quarter of 1952.

150800 F2-07

- (66) Comparison of carburetion experiments using "Generator" briquets coming from various sources in a rotary-grate-type producer. The amount allotted was 40,000 east marks and the deadline was set for the fourth quarter of 1952.

Ceramics Institute

Prof. Dr. (fnu) Haase

- 150800 F2-16 (66) Testing the voltages in ceramic materials, especially porcelain, for high-tension lines and the development of a new means of measuring the voltage. No amount was allotted and the deadline was set for the fourth quarter of 1952.

- 150800 F2-17 (66) Tests on high temperature white glazing (weissdeckende Scharffeuerglasuren). The amount allotted was 8,000 east marks and the deadline was set for the fourth quarter of 1952.

Institute for Metal Casting

Prof. Dr. (fnu) Netter

- 150800 F2-18 (66) Flow processes in cast iron grooves. The amount allotted was 10,000 east marks and the deadline was set for the fourth quarter of 1952.

Institute for Washing Ores

Prof. Dr. (fnu) Kirchberg

- 150800 F2-20 (66) Systematic development of cation-active flotation material for the mechanical concentration of oxide minerals. The amount allotted was 10,000 east marks and the deadline was set for the third quarter of 1952.

- 150800 F2-21 (66) Preparation of low-grade fluorite by a modern washing process in order to reclaim valuable raw material contained in the fluorite. The amount allotted was 25,000 east marks and the deadline was set for the fourth quarter of 1952.

Institute for Metallurgy

Prof. Grad. Eng. (fnu) Lange

- 150800 F2-25 (66) Tests on the dependence of the speed by which crude lead is refined on the arsenic, tin, and antimony content. The amount allotted was 7,000 tons and the deadline was set for the fourth quarter of 1953.

- 150800 F2-27 (66) Experimental and theoretical tests on the reworking of scrap metals, copper as well as lead, by the application of the vacuum technique. The amount allotted was 15,000 east marks and the deadline was set for the fourth quarter of 1953.

Institute for Metallurgy (Cont'd)

150800 F2-28 (66) Systematic experiments on the effect of lead dust, obtained while working lead, on rare metals which up to now have not been used, such as cadmium, thallium, tellurium, indium, and germanium for the purpose of using them. The amount allotted was 10,000 east marks and the deadline was set for the fourth quarter of 1953.

150800 F2-29 (66) Application of washing processes on metallurgical by-products in order to make full use of them economically and technically. The amount allotted was 15,000 east marks and the deadline was set for the fourth quarter of 1953.

Briquet Institute

150800 F2-40 (66) Tests on the refractoriness of briquets. Development of a practical testing oven, based on the Werner oven, to judge independently the technical performance of the briquet while it is fired. The amount allotted was 20,000 east marks and the deadline was set for the fourth quarter of 1953.

150800 F2-41 (66) Comparative test of various possible processes to determine the hardness of lignite and the relation of the hardness to the ability to be made into briquets. Clarification of the connection between hardness classification and ability to be made into briquets. The amount allotted was 10,000 east marks and the deadline was set for the fourth quarter of 1952.

150800 F2-43 (66) Influence of the preliminary compression of coal on the coal's ability to be pressed into briquets and on the characteristics of the briquet. The amount allotted was 20,000 east marks and the deadline was set for the fourth quarter of 1952.

150800 F2-44 (66) Tests on the quality evaluation and the improvement of quality of briquets. The amount allotted was 25,000 east marks and the deadline was set for the fourth quarter of 1953.

Institute for Metallography

Prof. Dr. (fnu) Erdmann-Jesnitzner

150800 F2-34 (62) Tests on the reactions in high-voltage electric arcs. The amount allotted was 14,000 east marks and the deadline was set for the fourth quarter of 1953.

2. The following research projects have no set deadline:

- 150800 F2-26 Basic tests on the dezincing of decilvered lead in a vacuum, as well as the improvement of the working of zinc foam containing rare metals, if the occasion should arise, by vacuum treatment. The amount allotted was 3,000 east marks.
- 150800 F2-31 Comparative tests concerning the corrosive action of welded seams and rivets to gas containers. The amount allotted was 5,000 east marks.
- 150800 F2-33 Experiments of lattice changes during plastic deformation of structural steels in the zone of critical strain. The amount allotted was 3,000 east marks.
- 150800 F2-37 Metallurgical research for reduction of the effect of cavitation in injection molding die casting by elimination of the effect of resonances from grain size. The amount allotted was 4,000 east marks.
- 150800 F2-39 The effect of the composition of additive alloys and special pretreatment on the viscosity and mold filling properties of molten metals. The amount allotted was 5,000 east marks.
- 150800 F2-47 Tests to locate CO₂ deposits in potash mining with geoelectric measuring methods. The amount allotted was 3,000 east marks.
- 150800 F2-48 Development of an apparatus to determine the K₂O content of core drillings. The amount allotted was 3,000 east marks.
- 150800 F2-49 Development of valve pipe "(Strobstron)" with a very short time discharge in order to strengthen water pipe impulses. The amount allotted was 4,000 east marks.
- 150800 F2-50 The stratigraphy of lignite on the basis of "pollen-analytischer" tests to determine the age of the coal located in central Germany.